



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,287	08/23/2006	Martin Oberscheidt	095309.56861US	1545
23911 7590 05/07/2009 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300				
EXAMINER				
MCGRAW, TREVOR EDWIN				
ART UNIT		PAPER NUMBER		
3752				
MAIL DATE		DELIVERY MODE		
05/07/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,287

Applicant(s)

OBERSCHIEDT ET AL.

Examiner

Trevor E. McGraw

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Examiner's Amendment

Examiner acknowledges the cancellation of Claims 1-8.

Claim Objections

Claim 20 is objected to because of the following informalities: the word "angel" is misspelled and should read as "angle" to keep the terminology of Claim 20 consistent. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to Claim 14, Examiner cannot determine which claimed feature (i.e. the nozzle seat or bore bottom) Applicant is reciting when stating "wherein the cross-

sectional areas are circular arc segments....” in view of Claim 13. Appropriate correction and clarification are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyauchi (US 20060043110).

In regard to Claim 9 and 20, Miyauchi teaches a spray head for high pressure jet applications having a nozzle carrier (2) defining a nozzle carrier bore and a bore bottom forming an included angle and at least one exchangeable nozzle (3b) disposed in the nozzle carrier bore of the nozzle carrier (2) and sealed along an annular surface having a nozzle seat, engageable against the wall of the bore (2c) bottom of the nozzle carrier to seal the nozzle seat against the bore bottom, that defines a flank angle corresponding to the included angle, wherein the nozzle seat of the exchangeable nozzle directly bears against the bore bottom in an installed, functional state, and wherein the included angle differs in size from the corresponding flank angle.

Although Miyauchi substantially teaches the present invention, it fails to teach where the bore bottom and nozzle seat are conically shaped.

However, it would have been obvious to one having ordinary skill in the art at the time the present invention was made to have tried to have made the bore bottom and the nozzle seat in a conically shaped manner as a person of ordinary skill has good reason to pursue the known option of having a bore bottom and nozzle seat conically shaped as within his or her technical grasp and would lead to an anticipated level of success. It is likely that the product of making a bore bottom and a nozzle seat in a conically shaped manner is not of innovation but of ordinary skill and common sense.

In regard to Claims 10-12, Miyauchi also teaches where the bore bottom (2d) has an included angle greater than a corresponding flank angle of the nozzle seat where the flank angle differs from the included angle by no more than about 5 degrees wherein the flank angle of the nozzle seat measures about 58 degrees and the included angle of the bore bottom measures about 60 degrees (See Figures 3A, 3B and 3C).

In regard to Claims 13- 15, Miyauchi further teaches where for positional locking of the exchangeable nozzle (3b) in the nozzle carrier (2), the cross-sectional area of the nozzle seat has a shape that corresponds to a shape of the cross-sectional area of the bore bottom, and where the cross-sectional areas are non-circular (See cross section of "3b" in Figure 2A) and the cross-sectional areas are circular arc segments spaced apart in parallel and the positional locking is effected on a high pressure side (see Figures 3A, 3B and 3C for positional locking).

In regard to Claims 17-19, Miyauchi additionally teaches where the flank angle differs from the included angle by no more than 1 degree and 3 degrees and also the annular surface defines an annular line.

Claims 9, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine (US 4,718,607).

In regard to Claim 9, Levine teaches a spray head for high pressure jet applications having a nozzle carrier (34) and at least one exchangeable nozzle (32) disposed in a bore of the nozzle carrier (34) and sealed along an annular surface against the wall of the bore (bore of "34"), wherein the bore, at a bore bottom against which the exchangeable nozzle (32) directly bears, is conically configured wherein the exchangeable nozzle (32), at a nozzle seat (see where components seat in Figures 3, 4 and 6) is in the region of the bore bottom is likewise conically configured, and where in an installed, functional state, the nozzle seat along the annular surface, bears directly and in a sealing manner against the bore bottom (see arrangement in Figures 3, 4 and 6).

Although Levine substantially teaches the present invention, it fails to teach where the bore bottom and nozzle seat are conically shaped.

However, it would have been obvious to one having ordinary skill in the art at the time the present invention was made to have tried to have made the bore bottom and the nozzle seat in a conically shaped manner as a person of ordinary skill has good reason to pursue the known option of having a bore bottom and nozzle seat conically shaped as within his or her technical grasp and would lead to an anticipated level of success. It is likely that the product of making a bore bottom and a nozzle seat in a conically shaped manner is not of innovation but of ordinary skill and common sense.

In regard to Claim 16 and 20, Levine further teaches where the exchangeable nozzle (32) is held in the installed state in the bore (bore of "34") by an external holding screw (36), where the holding screw (36) is screwed into the bore of the nozzle carrier (34), wherein the holding screw (36), at a screw bottom against which the exchangeable nozzle (32) directly bears, is conically configured, and wherein the exchangeable nozzle (32), in a screw seat of the screw bottom, is likewise of correspondingly conical configuration (see exploded view of Figure 4).

Response to Arguments

Objection to Drawings

Applicant's arguments, see the replacement drawings, filed 02/12/2009, with respect to the objection to the drawings have been fully considered and are persuasive. The objection to the drawings has been withdrawn in view of the showing of where the included and flank angles are located respectively within Figure 2.

Rejection under 35 USC § 112

Applicant's arguments, see the amendment to Claim 15, filed 02/12/2009, with respect to the rejection of Claim 15 have been fully considered and are persuasive. The rejection of Claim 15 has been withdrawn in view of the amendment to Claim 15 that better represents where the high pressure side is located in relation to what feature of the present invention.

However, Examiner is maintaining the rejection of Claim 14 as it is still unclear what cross-sectional area Applicant is claiming when viewing Claims 13.

Rejection under 35 USC § 102

Applicant's arguments with respect to claims 9-21 have been considered but are moot in view of the new ground(s) of rejection held under 35 USC § 103.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trevor McGraw whose telephone number is (571) 272-7375. The examiner can normally be reached on Monday-Friday (2nd & 4th Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. E. M./
Examiner, Art Unit 3752
/Len Tran/
Supervisory Patent Examiner, Art Unit 3752